



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,205	04/10/2006	Kazuo Hara	NNA-109-B	7066
48980 7590 07/02/2008 YOUNG & BASILE, P.C. 3001 WEST BIG BEAVER ROAD SUITE 624 TROY, MI 48084				
EXAMINER				
WINNER, TONY H				
ART UNIT		PAPER NUMBER		
3611				
NOTIFICATION DATE		DELIVERY MODE		
07/02/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@youngbasile.com
audit@youngbasile.com

Office Action Summary

Application No.

10/575,205

Applicant(s)

HARA ET AL.

Examiner

Tony H. Winner

Art Unit

3611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/10/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SG/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Claim Objections

1. Claims 10 and 15 are objected to because of the following informalities:
 - a. Regarding claim 10 the recitation "the road surface reaction force" lacks antecedent basis.
 - b. Regarding claim 15 line 2, the phrase "a vehicle state an estimate" is unclear and confusing. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4, 6-10, 13-19, and 21-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Sugitani et al. (USPUB. 2004/020661 A1).

Sugitani discloses all of the structural (col. 9-10, 17-18, 20, 22, 23, and 24) as claimed, a steering control device for use in a vehicle having a steering wheel that receives steering input, and an electronically-controlled steering unit that turns the vehicle's wheels over a road surface based on the position of the steering wheel, comprising:

a. a reaction force device (4) coupled to the steering wheel (2) and responsive to a control signal to apply a steering reaction force to the steering wheel (figure 2);

b. a controller (15) adapted to generate the control signal in response to the movement of the steering wheel and the road surface reaction force, wherein the controller varies the control signal to increase the steering reaction force in response to the road surface reaction force, and the controller determines the reaction force is larger when the steering wheel is turning than when the steering wheel is returning; wherein

c. the controller is responsive to vehicle speed sensor (11) and is further adapted to vary the control signal as a function of vehicle speed (col. 17-19, 22, and 24).

d. wherein the controller varies the control signal to decrease the reaction force at lower vehicle speed.

e. the controller is further adapted to calculate a vehicle state and an estimated steering force correction value based on the vehicle state, wherein the controller varies the control signal as a function of the estimated steering force correction value.

f. the controller varies the control signal to increase the steering reaction force by the steering force correction value.

g. the vehicle state is calculated based on information of the vehicle speed and yaw.

h. controller is further adapted to calculate whether the vehicle is within a rotation limit based on the angle of the wheels and the yaw rate of the vehicle, and

Art Unit: 3611

wherein the controller does not reduce the steering reaction force when the controller determines that the vehicle is within the rotation limit (col. 17-19, 22, and 24).

Regarding claims 4, 6-9 and 13-17 Sugitani discloses all of the claimed limitations.

Since the structure of Sugitani would result in all the method steps of claims 19 and 21-23 having been performed, those respective method steps are met by the Sugitani just discussed.

Note: The examiner further takes position that the words “adapted to” are not a positive limitation but only requires the ability to so perform. Therefore, Sugitani meets all of the functional language limitations in the broadest sense.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 3, 5, 11, 12, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugitani et al.

Sugitani is disclosed above but lacks the use of a steering wheel angular velocity as one of the elements for varying the control signal. However, the office takes position that selecting anyone of such elements (steering wheel angular velocity, vehicle speed,

yaw rate, wheel angle, wheel torque, etc...) would have been obvious to one of ordinary skill in the art so as to allow the device to fit a wider range of applications.

Note: The examiner further takes position that the words "adapted to " are not a positive limitation but only requires the ability to so perform. Therefore, Sugitani meets all of the functional language limitations in the broadest sense.

Conclusion

4. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Anthony H. Winner whose telephone number is (571) 272-6654. The examiner can normally be reached on Monday-Friday from 9:30 am to 6:30 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lesley Morris, can be reached at (571) 272-6651. The fax phone number for the organization where this application or proceeding is (571) 273-8300.

5. Information regarding the status of an application may be obtained from the Patent Application Information-Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

Art Unit: 3611

6. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-6584.

/Tony H. Winner/
Primary Examiner, Art Unit 3611
June 25, 2008